

Date: Thursday, 6/14/2007 3:18:11 PM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: X-TUBE MATERIAL
Job Number	: 32913		
Estimate Number	: 12449		
P.O. Number	: N/A	Part Number	: D6018125
This Issue	: 6/14/2007 S.O. No. : N/A	Drawing Number	: D6018 REV A
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A Type: PURCHASED PARTS	Drawing Revision	: A
Previous Run	: 27472	Material	: N/A
Written By	: <u>[Signature]</u>	Due Date	: 7/17/2007
Checked & Approved By	: <u>[Signature]</u>	Qty:	70 Um: Each
Comment	: Est Rev.A New Issue 06-06-09 JLM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O: 3986

CL07/06/15  
(70)

a) Description: 4130 Seamless Steel Tube

b) 2.299" OD X 2.00" ID X 125" Long

c) Tolerance on all dimensions are as per Dwg D6018

d) Material: AISI 4130 (AMS 6371) Seamless tube

Material certification required

2.0	D6018125P	Crosstube Material
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 70.0000 Each(s)  
 Crosstube Material

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect For Transit Damage

Ensure material certification is attached

CL07/07/25  
(70)

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

CL07-12-10  
(70)

5.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: CNK

CL07-12-10  
(70)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: 12 Date: 07/12/17  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 6/14/2007 3:18:11 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE MATERIAL

Job Number: 32913

Part Number: D6018125

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



70

Comment: FINAL INSPECTION/W/O RELEASE

2007/12/11

Job Completion



2007/12/14 C2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

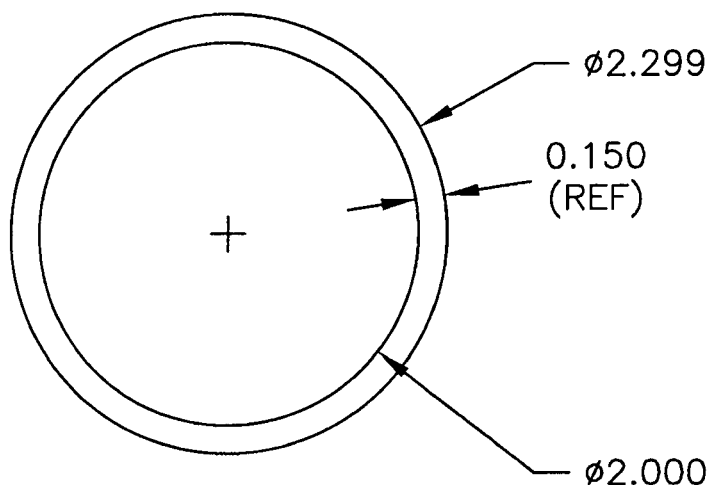
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN 92	DRAWN BY 92	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D6018	REV. A SHEET 1 OF 1
DATE 06.06.30		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	06.06.30	NEW ISSUE	

## SPECIFICATION CONTROL DRAWING



### NOTES

- 1) D6018-XXX CROSSTUBE  
LENGTH

WHERE XXX IS LENGTH IN INCHES  
EG. 125" LONG TUBE: D6018-125

- 2) MATERIAL: AISI 4130 (AMS 6371) SEAMLESS STEEL TUBE  
2.299 OD x 2.000 ID  
ANNEALED
- 3) TOLERANCES ARE PER ASTM A519 AS FOLLOWS:  
O.D.:  $+0.007/-0.000$   
I.D.:  $+0.000/-0.007$   
LENGTH: XXX  $+0.188/-0.000$   
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER

NO. 32913

RELEASED

06.08.15

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## UNITED STATES CUSTOMS SERVICE

# NORTH AMERICAN FREE TRADE AGREEMENT CERTIFICATE OF ORIGIN

<b>1. EXPORTER NAME AND ADDRESS</b> FACTORY STREET & METAL SUPPLY 14020 OAKLAND AVE. DETROIT, MI 48203 TAX IDENTIFICATION NUMBER: 38-126-8118	<b>2. BLANKET PERIOD (DD/MM/YY)</b> FROM: 07-20-07 TO: 07-19-08
<b>3. PRODUCER'S NAME AND ADDRESS</b> AVAILABLE UPON REQUEST	<b>4. SOLD TO:</b> DART AEROSPACE 1270 ABERDEEN ST HAWKENSURRY ONTARIO K6A 1K7
<b>TAX IDENTIFICATION NUMBER:</b>	

[illegible]


**CERTIFY THAT:**

THE INFORMATION ON THIS DOCUMENT IS TRUE AND ACCURATE AND I ASSUME THE RESPONSIBILITY FOR PROVIDING SUCH REPRESENTATIONS. I UNDERSTAND THAT I AM LIABLE FOR ANY FALSE STATEMENTS OR MATERIAL OMISSIONS MADE ON OR IN CONNECTION WITH THE DOCUMENT.

AGREE TO MAINTAIN, AND PRESENT UPON REQUEST, DOCUMENTATION NECESSARY TO SUPPORT THIS CERTIFICATE, AND TO INFORM, IN WRITING, ALL PERSONS TO WHOM THE CERTIFICATE WAS GIVEN OF ANY CHANGES THAT COULD AFFECT THE ACCURACY OR VALIDITY OF THIS CERTIFICATE

THE GOODS ORIGINATED IN THE TERRITORY OF ONE OR MORE OF THE PARTIES, AND COMPLY WITH THE ORIGIN REQUIREMENTS SPECIFIED FOR THOSE GOODS IN THE NORTH AMERICAN FREE TRADE AGREEMENT, AND UNLESS SPECIFICALLY EXEMPTED IN ARTICLE 411 OR ANNEX 401, THERE HAS BEEN NO FURTHER PRODUCTION OR ANY OTHER OPERATION OUTSIDE THE TERRITORIES OF THE PARTIES; AND

THIS CERTIFICATE CONSISTS OF 1 PAGES, INCLUDING ALL ATTACHEMENTS.

<p>11a. AUTHORIZED SIGNATURE  </p> <p>11c. NAME (PRINT OR TYPE)          JOSEPH BRICKER</p> <p>12. DATE 01/20/2007</p>	<p>11b. FACTORY STEEL &amp; METAL SUPPLY CO</p> <p>11d. SALES</p> <p>11f. TELEPHONE NUMBERS          (VOICE) [REDACTED] (FACSIMILE) [REDACTED]</p>
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1. VENDOR NAME AND ADDRESS FACTORY STEEL & METAL SUPPLY 14020 OAKLAND AVE. DETROIT, MI 48203		2. DATE OF DIRECT  7/20/2007	
4. CONSIGNEE NAME AND ADDRESS		3. PURCHASE ORDER p-00000-3986	
5. PURCHASER'S NAME AND ADDRESS (IF OTHER THAN CONSIGNEES) DART AEROSPACE 1270 ABERDEEN ST HAWKSBURY ONTARIO K8A 1K7		6. COUNTRY OF TRANSSHIPMENT HAWKSBURY	
7. COUNTRY OF ORIGIN UNITED STATES		8. TRANSPORTATION U.P.S.	
9. CONDITIONS OF SALE AND TERMS OF PAYMENT NET 30 DAYS		10. METHOD OF PAYMENT US FUNDS	
11. NUMBER OF PIECES: 140 PCS.		12. METHOD OF PAYMENT US FUNDS	
13. QUANTITY		14. UNIT PRICE	
15. TOTAL		16. IF ANY OF FIELDS 1 TO 8 ARE INCLUDED ON AN ATTACHED INVOICE, PLACE AN "X" IN THIS BOX:	
4130 STEEL TUBES COLD DRAWN SEAMLESS 2.339 O.D. x 170 Wall x 115" 2.299 O.D. x 160 W x 125" BOXING CHARGE		70 pcs. 70 pcs.	
10.00 ft 9.10 ft		6708.33 6635.42 920.00	
17. TARIFF NUMBER 7304.51		18. IF FIELDS 23 AND 24 ARE NOT APPLICABLE, PLACE AN "X" IN THIS BOX:	
19. EXPORTER NAME AND ADDRESS IF OTHER THAN VENDOR		20. ORIGINATOR (NAME AND ADDRESS) JOSEPH BRICKER 14020 OAKLAND AVE DETROIT MI 48203	
21. REVENUE CANADA RULING IF APPLICABLE		22. IF FIELDS 23 AND 24 ARE NOT APPLICABLE, PLACE AN "X" IN THIS BOX:	
23. IF INCLUDED IN FIELD 18, INDICATE AMOUNT A. TRANSPORTATION CHARGES, EXPENSES AND INSURANCE FROM THE PLACE OF DIRECT SHIPMENT TO CANADA B. COSTS FOR CONSTRUCTION, ERECTION AND ASSEMBLY INCURRED AFTER IMPORTATION TO CANADA C. EXPORT PACKAGING		24. IF INCLUDED IN FIELD 18, INDICATE AMOUNT A. TRANSPORTATION CHARGES, EXPENSES AND INSURANCE FROM THE PLACE OF DIRECT SHIPMENT TO CANADA B. COSTS FOR CONSTRUCTION, ERECTION AND ASSEMBLY INCURRED AFTER IMPORTATION TO CANADA C. EXPORT PACKAGING	

# PACKING LIST

FACTORY STEEL & METAL SUPPLY  
14020 OAKLAND AVENUE  
DETROIT, MI 48203

(313)883-6300 PHONE  
(313)883-4883 FAX

SOLD TO  
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

CUST ID  
DA3336  
JOB NAME

SALES ORDER #  
452  
ORDER DATE  
07/20/2007

SHIP TO  
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

BUYER  
CL. CLAVOIE  
Tel (613) 632-3336  
Fax (613) 632-4443

SALES REP  
JOE BRICKER  
PURCHASE ORDER #  
P000003986

SHIP INST

TERMS  
NET 30 DAYS

SHIP DATE  
07/20/2007  
SHIP VIA  
TST OVERLAND  
RESALE #  
59-2958719  
FOB:  
DETROIT

LINE	PCS	QUANTITY	DESCRIPTION	WIDTH	LENGTH	WEIGHT	UNIT PRICE	TOTAL
1	70		RD-N.2339170 4130N CD SMLSS RD TUBE 2.339" OD X .170W (2.00ID)  Our Tag # Heat # Pcs Total Ft 15065 70 670.833	115.000"		2,643.082		
2	70		RD-N.2299160 4130N CD SMLSS RD TUBE 2.299" OD X .160W (2.00 ID)  Our Tag # Heat # Pcs Total Ft 15066 70 729.167	125.000"		2,668.751		
3	1		PACK BOXING CHARGES  MTRS (CIRCLE) FAX SHIPMENT INVOICE ALL DATE: 7/20/07 INITIAL: <i>[Signature]</i>					
<div style="text-align: right; font-size: 2em; font-family: cursive;">7/20/07/25</div>								

TOTAL WT 5,311 LBS	RECEIVED BY - SIGNED	RECEIVED BY - PRINTED NAME	DATE RECEIVED
<div style="text-align: right; font-size: 1.5em; font-family: cursive;">7/20/07</div>			



# TEST REPORT



SHIPMENT  
001

6476

MICHIGAN SEAMLESS TUBE

SOUTH LYON, MICHIGAN 48178

ORDER NUMBER	CUSTOMER ORDER NUMBER	DATE	OFC	COM	DI WI	NET SLS	GR SLS	ACCOUNT NUMBER	US	1DR	PAC
029240	061907JOE	06/20/07	22	00	16	16	01	02598001FCO			

SOLD TO	FACTORY STEEL & METAL SUPPLY 14020 OAKLAND DETROIT MI 48203	SHIP TO	FACTORY STEEL & METAL SUPPLY 14020 OAKLAND AVENUE DETROIT MI 48203	SN TR INV
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ROUTING					PPD TRUCK	
OPEN TOP/FULLY TARPED/FOB SOUTH LYON MI						
ANALYSIS	SHAPE	PRODUCT	FC	ANNEAL	REQUESTED	
4130	ROUND	COLD DRAWN		PER SPEC	07/13/07	
SPECIFICATION		CMST	DESCRIPTION		PROMISE	
SEAMLESS AMS6371/A519			CD ALLOY AIRCRAFT		07/13/07	

SPECIAL INSTRUCTIONS  
60M PSI MIN YIELD, AIM 90 PSI, CERT TO A519-96, MILT-6736BN NOTE-2  
AMS-6360L W/DECARB LEVELS TO AMS-6371J, AMS-T-6736AN, 4130H & AMS-2301J. PRODUCE FROM 1-HEAT. MARK TO INCL GRADE, A519-96, MILT-6736BN NOTE-2, AMS-T6736AN, AMS-6371J, AMS6360L & 4130H. MAT'L TO BE BOXED OIL OD SURFACE CRITICAL. CIRCUMFERENTIAL GRIND MARKS UNACCEPTABLE

ITEM	QUANTITY	O.D.	I.D.	WALL	LENGTH	WT/FT	WEIGHT	
		2.339	2.000			3.938		08:57:20 07/11/07

ITM	BALE	--BALE--			ITM	PART
NUM	NUM	PCS	FTG	HEAT NO.	STATUS	NUMBER
1	1 2	40	383	00A053546	CUT 9' 7.000"	COM
1	2 2	30	287	00A053546	CUT 9' 7.000"	COM

CHEMICAL ANALYSIS												REMARKS
HEAT NO.	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Al		
00A053546	.280	.470	.014	.018	.240	.090	.860	.160	.240	.026		EF SDI USA

MECHANICAL PROPERTIES												EXPAN
HEAT NO.	ULT. STR. PSI	YIELD, PSI	% ELONG 2"	HARDNESS	HYDRO TEST PSI		ULTRA SONIC %		EDDY CURRENT			
00A053546	122,831	109,399	18.8	BHN 241-248					OK			
					BEND	FLATTEN	FLARE	REV. FLATTEN	FL			

DECARB OK GRAIN SIZE 7  
FREQ 0.02 SEV 0.03  
MACROS S1, R1, C2  
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10  
49 49 46 40 34 30 28 27 26 25  
MELTED & MANUFACTURED IN USA

We hereby certify that the reported data is correct according to Michigan Seamless Tube tests and those of its suppliers.



**MICHIGAN**  
seamless tube

# TEST REPORT

SHIPMENT

6475

MICHIGAN SEAMLESS TUBE

SOUTH LYON, MICHIGAN 48178

001

ORDER NUMBER	CUSTOMER ORDER NUMBER	DATE	OFC	COM	DIWI	NETSLS	GRSLS	ACCOUNT NUMBER	US	1DR	PA
029241	061907JOE	06/20/07	22	00	16	16	01	02598001FCO			

FACTORY STEEL & METAL SUPPLY  
14020 OAKLAND

DETROIT

MI

48203

FACTORY STEEL & METAL SUPPLY SN  
14020 OAKLAND AVENUE TR  
DETROIT MI 48203 INV

## ROUTING

OPEN TOP/FULLY TARPED/FOB SOUTH LYON MI

PPD TRUCK

OPEN TOP/FULLY TARPED/FOB SOUTH LIVER POOL					
ANALYSIS	SHAPE	PRODUCT	FC	ANNEAL	REQUESTED
4130	ROUND	COLD DRAWN		PER SPEC	07/13/07
SPECIFICATION		CMST	DESCRIPTION		PROMISE
AMS6371/A519			CD ALLOY AIRCRAFT		07/13/07
SEAMLESS					

SEAMLESS

## SPECIAL INSTRUCTIONS

80M PSI MIN YIELD, AIM 90 PSI, CERT TO A519-96, MILT-6736BN NOTE-2  
AMS-6360L W/DECARB LEVELS TO AMS-6371J, AMS-T-6736AN, 4130H & AMS-  
2301J. PRODUCE FROM 1-HEAT. MARK TO INCL GRADE, A519-96, MILT-6736BN  
NOTE-2, AMS-T6736AN, AMS-6371J, AMS6360L & 4130H. MAT'L TO BE BOXED  
OIL OD SURFACE CRITICAL. CIRCUMFERENTIAL GRIND MARKS UNACCEPTABLE

ITEM	QUANTITY	O.D.	I.D.	WALL	LENGTH	WT/FT	WEIGHT	
		2.299	2.000			3.443		11:29:1. 07/13/07

ITM	BALE	--BALE--				ITM	PART
NUM	NUM	PCS	FTG	HEAT NO.	LENGTH	STATUS	NUMBER
1	1 2	70	729	0000T2753	CUT 10' 5.000"	COM	

CHEMICAL ANALYSIS											
HEAT NO.	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Al	REMARKS
0000T2753	.310	.580	.009	.020	.240	.110	1.020	.150	.200	.030	EF TIMKEN USA
MECHANICAL PROPERTIES											
HEAT NO.	ULT. STR. PSI	YIELD, PSI	% ELONG 2"	HARDNESS		HYDRO TEST PSI		ULTRA SONIC %		EDDY CURRENT	EXPANS
0000T2753	112,010	90,659	25.0	BHN 229-235						OK	
						BEND	FLATTEN	FLARE	REV. FLATTEN	FLANG	

DECARB OK GRAIN SIZE 7  
FREQ 0.00 SEV 0.0  
MACROS S1, R1, C2  
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10  
53 52 51 50 45 42 39 36 34 33  
MELTED & MANUFACTURED IN USA

*Signature*

We hereby certify that the reported data a  
correct according to Michigan Seamless Tule  
tests and those of its suppliers.